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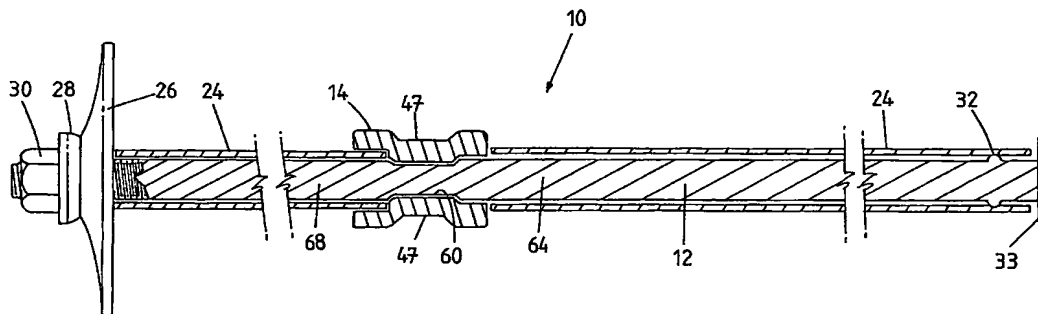
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- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A YIELDING ROCK BOLT



(57) Abstract: A yielding rock bolt (10) having a solid metal shaft (12) with a relatively wide portion (64) and a relative narrow portion (60) and an anchor member (14) mounted about the shaft (12). The anchor member (14) has longitudinal bore (40) which is of lesser dimension than the relatively wide portion (64). The anchor member (14) is mounted about the relatively narrow portion (60) adjacent the wide portion (64). In use the shaft (12) is extruded through the anchor member (14) to cause the rock (10) to yield as a rock face moves.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2003/001667

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. ⁷: **E21D 21/00**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPAT: 1.(yield+ or deform+ or extrud+ or swage+) and (collar+ or sleeve+ or sheath+ or cylind+ or annul+)
2.(narrow+ or small+ lesser or reduced)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2141804 A (THYSSEN INDUSTRIES AG) 3 January 1985 See whole document	1
A	US 4440526 (KOPPERS et al.) 3 April 1984 See whole document	1

☐ Further documents are listed in the continuation of Box C ☒ See patent family annex

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2003/001667

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
GB	2141804	BE	899784	DE	3320460
US	4440526	AU	77864/81	CA	1172477
		ES	8302848	FR	2496752
		ZW	23681		
				FR	2547351
				DE	3047709
				ZA	8106373

END OF ANNEX